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# Egypt and Israel: Tunnel Neutralization Efforts in Gaza

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Open Source, Foreign Perspective, Underconsidered/Understudied Topics

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### **Author Background**

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# EGYPT AND ISRAEL

## TUNNEL NEUTRALIZATION EFFORTS IN GAZA

By Mr. Lucas Winter

Over the past 15 years, the Egyptian Armed Forces (EAF) and the Israeli Defense Forces (IDF) have had limited success in interdicting movement across smuggling tunnels in Rafah, which is located between the Palestinian Gaza Strip and Egypt's Sinai Peninsula. These tunnels, many of which are rudimentary, are of various shapes and sizes and are used to transport small items. They are hard to detect from above ground, as they are often small enough or deep enough to neutralize detection methods. The simplest tunnels are big enough for a person to crawl through; many are big enough for two people to walk along side-by-side. Most are shored up with wooden supports; some are lined with wooden panels or even concrete. Goods are shuttled using mechanized pulley systems attached to canoe-shaped containers made from scrap metal. In larger tunnels, mining carts on rails are used for transport. Some of the Rafah tunnels are large enough for vehicles and livestock. The largest among them has been reported to be 30 meters deep and 3 kilometers long.

The most common access points to these tunnels are vertical shafts or egresses. When there is enough space, tunnels may also have larger, slanted entrances. The absence of technology to accurately identify or map rudimentary

tunnels below a depth of about 10 meters means that neutralization attempts usually begin at tunnel entrances. Some entrance shafts lead nowhere; others are one of many replaceable access points to a tunnel network. Caving or cementing a tunnel shaft might block a particular tunnel branch, but it does not usually render an entire tunnel network inoperable.

### Gaza Under Israeli Occupation

The modern history of the Rafah tunnels began in 1982, when Israel ceded control of the Sinai Peninsula to Egypt, as stipulated by the 1978 Camp David Accord. Israeli forces remained in the Gaza Strip, which had previously been occupied by Egypt. The border separating Egyptian-controlled Sinai from Israeli-controlled Gaza was demarcated by a 100-meter wide buffer zone running through the town of Rafah. Extended families owning land on either side of the new border were divided. Early smuggling was done through irrigation pipes linking the territory that was divided into Sinai (where the fields were) and Gaza (where the irrigation pumps were); restrictions on movement made the irrigation system obsolete, and the pipes were repurposed to smuggle lightweight, expensive goods such as gold, drugs, and spare parts for light weapons.

The 1993 Oslo Accords granted the Palestinians partial self-governance, but Israel retained full control over Gaza border crossings, airspace, and maritime routes. Israel claimed that shortly after the Oslo Accords, Gaza's Palestinian factions intensified their use of subterranean conduits to arm themselves. In 1994, Israel erected a security barrier around the Gaza Strip. The IDF monitored the Rafah border from atop a concrete wall some 30 meters behind the security barrier.

After 2000, Israel launched a campaign to demolish Rafah homes near the border and



IDF paratroopers operate within Gaza.

Photos by the Israeli Defense Force

establish a buffer zone. In May 2004, the IDF launched Operation Rainbow to destroy smuggling tunnels and to expand the buffer zone dividing Gaza from Egypt to about 300 meters. Operation Rainbow was triggered by an attack that killed five IDF soldiers along the border. The IDF sealed Rafah and deployed helicopter gunships, tanks, and infantry troops to various neighborhoods of Rafah. Armored bulldozers demolished homes in two Rafah refugee camps, amidst international criticism.

Israeli leaders had floated a plan to withdraw from Gaza several months before the launch of Operation Rainbow. In 2005, Israel withdrew all of its settlers and military positions from Gaza. The last Israeli forces withdrew from Gaza in September 2005, handing control of the Gaza side to the Palestinian Authority. The Egyptian side of Rafah was closed, allegedly for renovations.

In coordination with the Israeli withdrawal from Gaza, Egypt and Israel signed the Philadelphi Accord, named after the 13 kilometers of shared border between Egypt and Gaza in Rafah (the Philadelphi Route). The accord allowed Egypt to deploy a 750-man contingent of guards along the border in a part of Sinai that was to remain demilitarized. Israel retained full control over Gaza's seacoast and airspace, and cross-border traffic at the Rafah crossing was limited to people and that year's export harvest from Gaza. European observers monitored the crossing, and Israel had access to a live video feed. Materials entering Gaza from Egypt had to pass through the Israeli-controlled Kerem Shalom border crossing to the south, on the border between Egypt, Gaza, and Israel.

The Rafah crossing reopened in November 2005, with the Palestinian Authority in control on the Gaza side. Two months later, Hamas soundly defeated the Palestinian Authority party (Fatah) in the legislative elections. Low-level conflict for control over Gaza broke out between the two factions, and the Europeans tasked with monitoring the Rafah crossing fled due to safety concerns. They also left the Kerem Shalom crossing. Israel began implementing quotas on goods entering the Gaza Strip.

The Hamas tunnels came to the attention of global media in the summer of 2006, when Gaza gunmen used them to infiltrate an IDF position near Kerem Shalom. Two Israeli soldiers were killed, and one was captured. In response, Egypt indefinitely closed the Rafah border crossing. From that point forward, Hamas became inexorably linked to tunnels, whether they were tunnels used for smuggling in Rafah, military assault tunnels leading into Israel from Gaza, or defensive structures built beneath Gaza.

Once Hamas achieved full control over Gaza, they began "a program of industrial-scale burrowing underground" along the Rafah border.<sup>1</sup> Between 2008 and 2013, considered the "Golden Era of Tunneling," merchants and laborers in Gaza and Egypt became wealthy from cross-border smuggling. Local production limitations, combined with Israeli prohibitions, created high demand for items smuggled into Gaza. Disparities in prices and currency values meant that



**Israeli Defense Forces find a tunnel near the Erez crossing.**

Gaza's residents could afford a variety of products from Egypt, and smuggling became a multimillion dollar industry. The buffer zone Israel had created in 2004 turned into a warren of tarp-covered tunnel shafts. According to one calculation, there were nearly 2,500 tunnels beneath the Rafah border crossing, although that number likely refers to entrances or tunnel segments rather than actual cross-border passageways. An entire economy developed around the tunnel-smuggling business servicing the Gaza market. In Egypt, it extended well into the North Sinai capital of al-Arish, nearly 60 kilometers west of Rafah.

### **Egyptian Tunnel Neutralization Efforts**

**I**n December 2008, Israel launched Operation Cast Lead in Gaza. The offensive was largely aerial, and its targets included parts of Rafah. During this operation, the EAF took the lead in tunnel neutralization efforts, launching a campaign on its side of Rafah by plugging entrances with solid waste, sand, or explosives and flooding passages with sewage. The Egyptian government also committed to building a 25-meter-deep underground steel barrier to halt cross-border tunneling traffic. Even if it had been feasible, the project was ineffective. As one report notes, "Egypt cited logistical problems such as difficulties hammering steel plates more than four meters deep in stony ground. Tunnel operators cut through completed segments with blow torches, nullifying the multimillion dollar project for the cost of a few thousand dollars."<sup>2</sup> The plan was abandoned by 2012.



*“Israeli and Egyptian forces have used similar methods to interdict Gaza’s smuggling tunnels: installing underground barriers, digging water-filled moats, sealing tunnel shafts, and creating buffer zones.”*

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EAF maneuvering space in North Sinai was constrained by the Camp David Accords and by the government’s fraught relationship with local residents. Tensions and distrust between the government and local residents increased following the mass arrest of Sinai men in 2006 after a string of bombings in Sinai tourist areas. Egyptian security apparatus dominated government presence in the area. The Interior Ministry was among the biggest losers in the power reshuffle that followed President Hosni Mubarak’s February 2011 resignation, and security forces in the North Sinai withdrew as soon as Mubarak resigned. Some Egyptian government operatives were chased away by local armed militias. The Supreme Council of the Armed Forces quickly filled Egypt’s post-Mubarak power vacuum. Within weeks of the Mubarak regime overthrow, the council had deployed the army to reassert government control over North Sinai.

Security in North Sinai remained slippery for the rest of 2011, and the council gradually deployed additional troops and armored personnel carriers to the area. Mohammed Morsi was elected to Egypt’s presidency the following summer. As a member of the Muslim Brotherhood, Morsi was on friendly terms with Hamas leaders on the other side of the tunnels. A mere 5 weeks after his inauguration, Morsi came under strong pressure to deal with the problem of the tunnels. On 5 August 2012, unknown assailants killed 16 Egyptian military and security personnel near the border. They then seized an armored personnel carrier and rammed it into the border gate and across into Israel, where they were eventually killed.

In response to the attack, the EAF launched Operation Sinai, which brought specialized troops, heavy armor, and attack helicopters into parts of Sinai that were still technically considered demilitarized. Egypt’s national media greeted the operation with enthusiasm, though there was little evidence to back government claims of heavy, armed engagements. In Rafah, the EAF had been conducting sporadic tunnel interdiction measures since 2009. The frequency with which tunnel shafts were plugged, caved, or flooded may have increased during Operation Sinai, but the results of the measures were similar. According to some newspaper reports, EAF interdiction efforts created little more than a temporary nuisance to tunnel owners.

Poorly concealed, rudimentary tunnel shafts were most commonly targeted; bribery and difficulty in accessing the more sophisticated tunnels and their access points may have kept them safe. As with Israel’s 2004 accounting system, collapsed shafts were likely counted as destroyed tunnels. In February 2013, an Egyptian court ordered the Morsi government to ramp up efforts to close all tunnels and illegal crossings into Gaza. Morsi’s detractors accused him of blocking EAF antitunneling activities in deference to his Hamas allies. After Egyptian soldiers were temporarily abducted

near the border in May 2013, Egyptian media clamored for stronger measures than the government was providing. In July 2013, Morsi was overthrown by a military-led coalition headed by Defense Minister Abdel Fattah al-Sisi.

The aftermath of Morsi’s overthrow saw Egypt’s ruling class enveloped by fear and hostility toward anything related to the Muslim Brotherhood, including Hamas. Tunnel interdiction activities were immediately ramped up, driven by fears that Hamas would seek to destabilize Egypt’s new ruling coalition by smuggling in weapons and trained fighters via Rafah’s tunnels.

In the summer of 2013, EAF engineers began demolishing houses adjacent to the border with Gaza. Open-source satellite imagery confirms that several structures near the border were razed. Online footage shows the demolition of a few of these structures. Some reports were quick to characterize the efforts as practically definitive. Yet the policy of forced displacement and home demolition near the border only severed the shortest branches of tunnel networks; furthermore, it came at high social and political cost.

Following Israel’s 2014 Operation Cast Lead targeting Gaza, EAF tunnel interdiction efforts spiked again. Satellite imagery shows that shortly after the Israeli offensive began, extensive razing occurred on the Egyptian side. By then, EAF and state security personnel throughout North Sinai had come under regular attack by a network of armed Sunni insurgents calling themselves Ansar Bayt al-Maqdis, “The Supporters of Jerusalem.” The group, which in late 2014 became the “Sinai Province” of the Islamic State of Iraq and Syria (ISIS), was eager to recruit from the ranks of bored, angry, and unemployed males who felt unfairly targeted by the military operation. Taking a page from the ISIS playbook in Syria and Iraq, they began a sustained campaign to kill government personnel and collaborators while targeting vulnerable security targets. In the summer of 2014, the group ambushed and executed 25 policemen, car-bombed the military intelligence headquarters in Rafah, and perpetrated other attacks.

In October 2014, Ansar Bayt al-Maqdis fighters killed more than 30 Egyptian soldiers. In response, Egypt deployed more troops and armor along the highway linking Rafah to the town of al-Arish. The Egyptian government declared a state of emergency in North Sinai and began demolishing additional homes in Rafah. Media reports described how the Egyptian military knocked on doors and gave residents 24 hours to vacate homes located 300 meters from the border. A total of 880 homes were required to be vacated to enforce a 500-meter-wide buffer zone. Egyptian authorities had proposed the 500-meter buffer zone the year before, but local leaders rejected the idea, arguing that it would unfairly

*(continued on page 34)*

This corporate brand is what shapes ideas and identity within the Engineer Branch and throughout the military community. This corporate brand is inculcated into Army engineers through shared experiences, stories, and images.

A deliberate system of recognition and information shaping is necessary for the individual engineer brand to be embraced throughout the ranks. Some questions that could be explored for further development include—

- Beyond the broad strokes of DA Pam 600-3, what specified or implied tasks does an engineer officer need to be able to complete at different grades?
- What career counseling can be conducted for Soldiers who plan to stay in the Army for only one tour versus those who plan to make the Army a career?
- How can big data be used to develop career tracks for individuals?
- What recruitment techniques and incentives can be used to increase the number of degreed engineers in the Engineer Regiment?
- What mentorship programs can be established to groom and prepare officers for Broadening Opportunity Programs?
- What does the rest of the Army think an engineer officer is or should be?
- How should branding success be demonstrated or measured?
- How can social media best be leveraged?

Building a personal brand is no easy task. There is no definitive way to measure a personal brand, and events outside the individual's span of control can influence external perceptions. Recognizing that the goal of branding is to provide a "promise" to leaders, subordinates, peers, and outside stakeholders, further development of the engineer officer brand can help direct individual efforts and inform general expectations.

#### Endnotes:

<sup>1</sup>David Diamond, "What Is the Purpose of a Brand?" 12 January 2014, <<https://www.quora.com/What-is-the-purpose-of-a-brand>>, accessed on 7 June 2017.

<sup>2</sup>DA Pam 600-3, *Commissioned Officer Professional Development and Career Management*, 3 December 2014.

<sup>3</sup>DA Pam 600-25, *U.S. Army Noncommissioned Officer Professional Development Guide*, 11 September 2015.

<sup>4</sup>DA Pam 600-3.

<sup>5</sup>U.S. Army Human Resources Command, <<https://www.hrc.army.mil/content/Engineer%20Officer%20Welcome%20Page>>, accessed on 12 June 2017.



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(*"Egypt and Israel," continued from page 32*)

forcibly displace many people. A decree that was passed in 2014 delineated an area around much of Rafah, calling it the new buffer zone. Most of the town was to be relocated to "New Rafah," if and when the replacement town was built.

Attacks against the Egyptian military escalated in tandem with evacuations and demolitions in Rafah. In January 2015, a heavily fortified military base in al-Arish came under direct fire from militants. In September, the EAF launched its heaviest offensive in North Sinai, dubbed Operation Martyr's Right, after an attack that killed anywhere between a dozen and 100 Egyptian troops, depending on the source. There was much about the Egyptian operation that seemed driven by revenge rather than a strategic plan.

Operation Martyr's Right included a plan to create a moat by flooding a trench that had been dug near the border with some combination of seawater piped in from the Mediterranean Sea and freshwater pumped from the aquifer below. Local leaders had proposed the concept of a moat the year before as an alternative to the buffer zone plan. A moat had also been considered and abandoned by Israel 2004. In September and October 2015, the EAF pumped limited amounts of water into the deep trench they had dug along the border. The plan was criticized for the potential negative impact of the deep seawater canal on Rafah's aquifers. The main aquifer is at a depth of about 45 meters, which limits the depth of the tunnels. According to some reports, tunnel owners adapted by reinforcing their tunnels with concrete and/or metal to protect against humidity and to withstand pressure from above. Some reports claim that even the EAF's trial runs nearly brought tunneling to a halt, though it is unclear whether this was a temporary condition or a durable state of affairs.

The IDF and EAF have employed similar methods for interdicting Gaza's rudimentary smuggling tunnels, including installing underground barriers, digging water-filled trenches, sealing tunnel shafts, and creating buffer zones. These interdiction methods have all had political costs, and tunnel diggers have found relatively simple ways of circumventing them. As a result, tunnels are likely to remain a persistent feature of this and similar operational environments.

#### Endnotes:

<sup>1</sup>Human Rights Watch, "Razing Rafah: Mass Home Demolitions in the Gaza Strip," October 2004, <<https://www.hrw.org/reports/2004/rafah1004/rafah1004full.pdf>>, accessed on 7 July 2017.

<sup>2</sup>Nicholas Pelham, "Gaza's Tunnel Phenomenon: The Unintended Dynamics of Israel's Siege," *Journal of Palestine Studies*, Vol. 41, No. 4, 2011–2012, p. 6, <<http://palestine-studies.org/jps/fulltext/42605>>, accessed on 7 July 2017.



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